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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/912,471

07/24/2001

Theodore M. Wong

SP-1093.3

6281

7590

11/16/2005

Richard B. Taylor  
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EXAMINER

WARE, DEBORAH K

ART UNIT

PAPER NUMBER

1651

DATE MAILED: 11/16/2005

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**MAILED**  
**NOV 15 2005**  
**GROUP 1600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/912,471  
Filing Date: July 24, 2001  
Appellant(s): WONG ET AL.

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James Cordek  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 23, 2005, appealing from the Office action mailed December 27, 2004.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

There was a Decision on Appeal for patent application U.S. Serial No. 09/785,936 as Appeal No. 2004-0450.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

EP 0 380 343

Simell et al

01-08-1990

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 81-93 and 96-124 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 380 343 for reasons of record. This rejection is set forth in prior Office Action of February 4, 2003, pages 4-6, all lines. The rejection is also reiterated below:

Claims are drawn to a method for producing a soy protein material comprising forming a slurry treating the slurry with preparation containing acid phosphatase and washing the soy protein.

EP Patent teaches a method for producing a soy protein material comprising forming a slurry treating the slurry with preparation containing acid phosphatase and washing the soy protein. Note the abstract, page 2, lines 1-5, 9, all lines, page 4, lines 1-32, page 6, lines 15-30, and pages 7- 9, all lines.

The claims appear to be identical to the disclosure of the EP Patent and are therefore, considered to be anticipated by the teachings of the cited reference. However, in the alternative that there is some difference between the claims and the cited reference then such difference is considered to be so slight as to render the claims prima facie obvious over the cited reference.

**(10) Response to Argument**

**Rejection under 35 USC 102(b)**

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Appellants' urge claims 81-93 and 96-124 are not inherently anticipated, see page 9, last paragraph, lines 4-5 of Appeal Brief; and that anticipation by inherency applies when a claimed element is "always present" and "naturally flows" from the prior art. Appellants' Representative is directed to the abstract at line 1, and page 6, lines 19-20 and 39-40, of the cited prior art EP 0 380 343 patent wherein a method of producing soy protein material using an enzyme preparation containing acid phosphatase is disclosed. Furthermore, each of the steps employed by Appellants' claimed processes are disclosed:

providing or forming an aqueous slurry of a soy protein material (i.e. disclosure of a particulate soy bean water slurry at page 10, lines 39 of the EP 0 380 343 patent);

treating the slurry with an enzyme preparation containing acid phosphatase enzyme at a temperature, a pH and for a time period effective for said enzyme preparation to provide for degradation of the soy protein material (i.e. disclosure of adding an enzyme preparation containing an acid phosphatase to a particulate soy bean water slurry at a temperature and pH and for a time period effective for degradation of material contained in the soy protein material at page 10, lines 35-36, lines 38-40, and lines 49-51 of the EP 0 380 343 patent); and

a washing step of the soy protein material (i.e. recovering the soy proteins using conventional removal processes by washing the soy protein degraded material at page 6, lines 51-52). Note that the washing step comes after the enzyme treatment step, note page 6, lines 38-52, of the cited EP 0 380 343 patent (hereinafter referred to as cited patent).

Furthermore, the effective amount of the enzyme preparation may be easily determined by a person skilled in the art, note page 7, lines 7-10 of the cited patent. RNA is a material element "always present" in soy protein. RNA "always" contain phosphorus groups, and these groups would be cleaved by the enzyme preparation containing acid phosphatase because the nature of the enzyme is to cleave phosphorous. Therefore, the enzyme element of the cited patent is "always present" in the disclosed process for producing a soy protein material of the cited patent, and thus, degradation of RNA does "naturally flow" from the prior art disclosure.

Therefore, the inherency of the degradation of RNA in the cited patent is not a probability or possibility; but an inherent function and property if you will, to the identical enzyme preparation and step for treating a soy protein material as clearly taught by the cited patent. Therefore, degradation of RNA is a necessary consequence of the intended degradation of the soy protein material disclosed by the cited patent.

The arguments that the cited patent discloses enzyme preparations containing no acid phosphatase enzyme is noted, however, the rejection is directed to the positive teaching by the cited patent wherein an enzyme preparation containing acid phosphatase is utilized by the invention of the cited patent. Appellants own claimed invention uses the same identical enzyme preparation under identical conditions as disclosed by the cited patent which is the reason why the inherency argument applies so well in this case.

Furthermore, Appellants own claimed enzyme preparation does not necessarily omit the use of other enzymes and thus, their claims must include other enzymes when

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given their broadest interpretation. The term "containing" has the same meaning as "comprising" and does not omit other enzymes in an enzyme preparation containing acid phosphatase. Regarding Appellants' argument in reference to Exhibits A and B wherein phytase does not degrade RNA is noted. However, the phytase taught by the cited patent is not a limiting factor because neither the enzyme preparation as claimed or disclosed by the cited patent are limited to phytase but both contain acid phosphatase.

Appellants' own claims read on an enzyme preparation containing FINASE which **must always** contain acid phosphatase as disclosed by the cited patent; and hence inherent anticipation by the cited patent is well established in the teachings of the patent. Thus, Appellants' argument that the cited reference does not and **must always** contain an acid phosphatase in order to establish inherent anticipation is not persuasive for this reason as well. Also for reasons discussed *supra* the degradation of RNA is a necessary consequence of the **deliberate intent** of the process of the cited patent which is to not only degrade phytate but to degrade soy protein material which contains RNA.

Furthermore, Appellants' argument that phytic acid and RNA both contain phosphorous groups and that one of skill would not use the teachings of the cited patent to arrive at the claimed invention is noted. However, although phytic acid and RNA are very different chemical entities one of skill in the art would have been directed to use FINASE containing acid phosphatase to degrade either phytic acid or RNA because the degradation of each are a necessary consequence of using an enzyme preparation

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containing acid phosphatase on a soy protein material. This is based upon not "Routine experimentation" but what one of skill can glean from the teachings of the cited prior art. Thus, the rejection under 35 USC 102(b) is sustained.

**Rejection under 35 USC 103**

The argument that the cited patent provides no disclosure at all relating to degrading ribonucleic acids; and that one of skill would not look to the cited patent for any guidance in determining an effective method for degrading RNA in a soy protein material and hence a *prima facie* case of obviousness has not been established is acknowledged. However, Appellants' claims are directed to process claims claimed in terms of a property or function of their enzyme preparation to degrade RNA in a method for producing a soy protein material as discussed *supra*.

While the property or function of the enzyme preparation of the cited patent is disclosed to degrade soy protein material, and there is no disclosure in the cited patent to degrade RNA in the soy protein material it has been decided that "there is nothing inconsistent in concurrent rejections for obviousness under 35 USC 103", discussed herein, "and for anticipation under 35 USC 102", as discussed *supra*. In re Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). Furthermore, the inherent teaching of the cited patent, a question of fact, arises both in the context of anticipation and obviousness." In re Napier, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also In re Grasselli, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983).



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Therefore, although the cited patent does not disclose degrading RNA in a soy protein material, the inherent teaching of the cited patent of degrading RNA as discussed *supra* does provide support for establishing a *prima facie* case of obviousness when in the alternative case there is a showing of some difference between what is claimed and disclosed by the cited prior art. Thus, this rejection in the alternative under 35 USC 103 is, therefore, sustained.

**(11) Related Proceeding(s) Appendix**

Copies of the court or Board decision(s) identified in the Related Appeals and Interferences section of this examiner's answer are provided herein.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




Deborah K. Ware

Conferees:

Michael Wityshyn

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,936	02/16/2001	Theodore M. Wong	SP-1093.1	7098

7590 04/22/2003  
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EXAMINER

WARE, DEBORAH K

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DATE MAILED: 04/22/2003

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 15

Application Number: 09/785,936  
Filing Date: February 16, 2001  
Appellant(s): WONG ET AL.

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Richard B. Taylor  
For Appellants

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed January 29, 2003.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

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**(2) *Related Appeals and Interferences***

A statement that there are no related appeals or interferences pending with respect to the present application is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

*The statement is correct.*

**(8) *Claims Appealed***

A correct copy of appealed claims 79-94, 97-111, 113-118 and 120-129 appears on page 15 of the Appendix to the appellant's brief.

**(9) *Prior Art of Record***

EP 0 380 343 A2

Simell et al.

8-1990

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**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 79-94, 97-111, 113-118 and 120-129 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over EP 0 380 343 A2 patent. This rejection is set forth in prior Office Action, Paper No 6, pages 4-5, of the office action of December 4, 2001.

**(11) Response to Argument**

The 35 U.S.C. 102(b) rejection

Appellants' urge at page 5, last 5 lines of Appeal Brief that cited EP patent teaches degradation at 750 Phytase Units per gram of soy flakes. However, in the cited EP patent enzyme dosages are presented as phytate-degrading units (PU) per gram soy flakes using Finase and not Phytase, note page 8, at lines 2-5, as alleged by Appellants at page 5, last line of the Appeal Brief. The claimed acid phosphatase (disclosed at page 6, lines 16-18 of instant specification) and acid phosphatase of the cited EP patent (disclosed at page 6, line 20) both come from the same source: *Aspergillus spp.*

Appellants further urge at page 6, first full paragraph that all claimed elements are not disclosed and specifically summarily three components are missing: RNA degradation with an enzyme preparation containing acid phosphatase in a vegetable protein slurry and enzyme preparation in the slurry in an amount of from about 0.1% to about 10% by weight of the protein material (dry) is not disclosed. However, for the following reasons all of the claim elements are considered to be anticipated by the cited

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EP patent (reference) and each of the first, second and third arguments are addressed as follows:

*First*, the EP patent discloses one phytate-degrading unit (1 PU) is the amount of enzyme which liberates 1 nmol (nanomole) of inorganic phosphorous from sodium phytate per minute under standard conditions (40 °C, pH 5.5) at page 8, lines 1-5. The enzyme in the Table 1 is Finase which includes phytase and acid phosphatase. Thus, the reference (EP patent) teaches a vegetable protein material having phytic acid and phytates and ribonucleic acids (RNAs) are inherently taught by the cited EP Patent. Furthermore, the Finase enzyme which is disclosed by Table 1, of page 8, is a known combination of phytase and acid phosphatase, thus, RNAs are inherently degraded by the Finase.

Additionally to address *Appellants' first argument*, the vegetable protein material is disclosed by the cited reference to be processed via the formation of an aqueous slurry of a vegetable protein material and an enzyme preparation containing acid phosphatase and a phytase enzyme, note page 10, lines 35-40. Furthermore, the effective amount of the enzyme preparation may be easily determined by a person skilled in the art, note page 7, lines 7-10. RNAs contain phosphorous groups, these groups would be cleaved by the Finase and the RNAs present in the soy protein are degraded.

Thus, a process step of subjecting a vegetable protein material to acid phosphatase enzyme in a slurry to degrade RNAs in the material to obtain a protein material having a low concentration of RNAs is inherent to the cited disclosure, and

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therefore anticipated as well by this cited teaching. Hence, production of a vegetable protein material having low concentrations of RNA concentrations is inherent to the teachings of the cited EP patent. Also a washing step of the proteins at the end of the process for providing of the vegetable protein having low amounts or concentrations of phytate and phytic acid is clearly disclosed at page 6, line 52 and page 6, lines 10-20.

The presence of acid phosphatase and phytase in the disclosed enzyme preparation is clearly taught by the cited reference as is the production of a vegetable protein material having low phytate and phytic acid content. Note page 6, lines 10-20 and page 8, lines 1-20 and Table 1. Also enzyme preparations are disclosed by the reference to be capable of degrading additional plant material and that this activity may contribute to the improvements and effects which are obtained by the disclosed method, note page 6, lines 29-36. Therefore, RNAs are inherently degraded by the acid phosphatase present in the Finase enzyme of the cited disclosure.

Appellants' own Appeal Brief even admits that soy protein contains RNAs and that this is common knowledge. Note pages 2, 6 and 8 second full paragraphs, lines 10-12 and lines 4-5, and lines 3-5, respectively, of the Appeal Brief. Further, note Appellants' own specification in the Background section, page 1, third full paragraph, lines 2-6. wherein it is disclosed that RNAs are contained in vegetable protein materials. Therefore, degradation of RNAs in the soy protein would be "always present" and "naturally flows" from the cited prior art disclosure, because it is *common knowledge* (note Appellants' own Appeal Brief and Background in their specification, as noted above) that soy protein contains RNAs and furthermore, phosphorous groups present in

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the RNAs are cleaved by acid phosphatase, as disclosed in the cited EP Patent noted above, and hence RNAs are degraded. Therefore, degradation of the RNAs is inherent to the cited EP patent disclosure. It is not a probability or a possibility that the RNAs are degraded because they are degraded by the acid phosphatase clearly present in the enzyme preparation disclosed by the cited disclosure.

The claimed feature of degradation of RNAs in the vegetable protein material is anticipated inherently by the cited reference because it is a necessary consequence of the disclosed enzyme preparation (enzyme) acting upon the disclosed vegetable protein material (substrate) and further a consequence of what the cited disclosure deliberately intended which is a purified or isolated vegetable protein material. Furthermore, acid phosphatase may be substrate specific and target the RNAs present in the vegetable protein material (as admitted by Appellants Brief, at page 6, noted above) because of the presence of phosphorous groups on the RNAs.

Appellants' argument that the cited disclosure does not necessarily require the use of an acid phosphatase enzyme to produce a phytate-free or low-phytate soy protein, and therefore, degradation of RNAs with an acid phosphatase enzyme cannot be a necessary consequence of, does not naturally flow from and is not always present in the disclosed method is not deemed persuasive for reasons as noted above; and because the presence of acid phosphatase and phytase in the enzyme preparation is clearly disclosed by the cited EP patent.

The results (i.e. Table 1) of the cited disclosure clearly teach the use of Finase which as set forth above encompasses both enzymes: acid phosphatase and phytase.



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Therefore, the presence of acid phosphatase is not once excluded from any of the disclosed comparative examples of the cited EP patent. Thus, the presence of acid phosphatase and phytase in the enzyme preparation as disclosed by the cited EP patent is a necessary consequence, does naturally flow from, and is always present in the method disclosed in the '343 patent.

With respect to *Appellants' second argument* at page 7, last full paragraph, as set forth above none of the comparative examples of the cited EP patent teach the exclusion of acid phosphatase. The enzyme preparation disclosed by the cited EP patent is identical to the enzyme preparation of the claimed invention. The argument is not persuasive because the disclosed method is practiced with the identical preparation as claimed by Appellants. The acid phosphatase present in the disclosed enzyme preparation carries out the step of degrading RNAs.

Acid phosphatase is recognized by the cited EP patent and would degrade RNAs as Appellants have admitted. Note page 8, of Appellants' Appeal Brief at page 8, second full paragraph, lines 3-5. The issue that RNAs are not inherently degraded is not deemed persuasive because the RNAs are present in the vegetable soy protein and acid phosphatase degrades RNAs, this even Appellants have admitted on the record as noted above. Thus, the RNAs are present in the cited reference since RNAs are present in the vegetable protein, which is specifically disclosed in the cited EP patent as is the enzyme preparation containing acid phosphatase. Both being present as disclosed by the cited EP patent, the degradation of RNAs in the vegetable protein being treated with the disclosed enzyme preparation, then logically flows and is a

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necessary consequence of the disclosed enzyme preparation's activities and effects upon the disclosed vegetable protein material.

Appellants' comments regarding the parent case (08/996976), now abandoned, of which the present and instant application is a divisional thereof, are noted. Also noted are Appellants agreement that RNA would be degraded by use of an enzyme preparation containing acid phosphatase in the method of the cited '343 patent. The clarification that phytates are degraded by the enzyme, and not soy protein, is also noted. However, RNAs as admitted by Appellants are also degraded by acid phosphatase. Again note page 8, second full paragraph, lines 3-5, of Appellants Appeal Brief, as noted above. The intention of the cited EP patent is to degrade not only phytates but also phytic acid, therefore, these ingredients of the vegetable protein which also includes RNAs are degraded by the enzyme preparation disclosed by the cited EP patent. RNAs are inherently degraded as well and are anticipated by the cited reference in that this is another activity contributing to the effects obtained by the method disclosed by the cited EP patent. Therefore, for these reasons and for those discussed *supra* Appellants arguments are not deemed persuasive.

*Thirdly*, as also discussed *supra* one phytate-degrading unit (1 PU) is the amount of enzyme which liberates 1 nmol (nanomole) of inorganic phosphorous from sodium phytate per minute under standard conditions (40 °C, pH 5.5). This is clearly disclosed by the cited reference at page 8, lines 1-5. Therefore, Appellants' third argument regarding activity levels not being equivalent to a specified amount or concentration of enzyme is not deemed persuasive. The cited disclosure clearly defines amounts and

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dosages and not just enzyme levels as set forth by Appellants. The amount of enzyme preparation as claimed herein is disclosed with respect to the dosages depicted in Table 1, note page 8 of the cited EP patent. One of skill in the art would be able to determine appropriate dosages from the cited EP patent, note page 7, lines 8-. The instant specification of the application at page 8, lines 1-4, discloses the equivalent dosages of between 400 to 1400 PU enzyme per gram of vegetable protein. Also in Table 1, as noted above for the cited EP patent, discloses a value (i.e. 0.6%) which falls within the claimed range of 0.1% to 10%. Therefore, the range as claimed is taught by data represented and dosages disclosed by the cited EP patent.

The specific amount or dosage is disclosed by the cited EP patent in terms of a defined amount as discussed *supra*. Based upon the amount of vegetable protein one of skill in the art can determine how much of an enzyme dosage to utilize. In example 2 phytic acid is present in an amount of 1.9%, and one of skill can determine how much phytate is present by extracting the protein with an acid for 30 minutes at room temperature, precipitating phytic acid from the supernatant of the extract and then using chromatography to determine the phytate. Therefore, since phytic acid is used to determine phytate of which is useful to determine how much enzyme preparation to use based upon the amount of vegetable protein material, then Table 1 represents percent enzyme preparation in relationship with the PU of Table 1.

Therefore, since 1 PU (*one phytate-degrading unit*) is defined as an amount of enzyme and phytic acid is depicted in Table 1 at 0.6% which corresponds to amount of enzyme PU=500 then percent amount of enzyme to be added is 0.6 % because phytic

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acid is a useful determinant for phytate concentration which is used to determine one phytate-degrading unit. Thus, 0.6% is clearly within the range of 0.1% to 10% as claimed herein by Appellants. Therefore, in the absence of persuasive evidence to the contrary the amount of enzyme preparation added by the disclosed method of the cited EP patent is not deemed to be outside of the range set forth by Appellants' claimed invention. Furthermore, Appellants' own Appeal Brief clearly provides for an equivalent wherein 400 to 1400 PU enzyme per gram of vegetable protein is disclosed by their own specification at page 8, lines 1-4 (note the brief at page 11, first full paragraph). These enzyme dosages, disclosed by Appellants' own instant specification as noted above, clearly are within the PU dosages disclosed at page 8, Table 1, of the cited EP patent. The limitations of dependent claims 80-94, 97-111, 113-118, 120-122 and 124-129 are also disclosed by the cited EP patent and are anticipated by this reference for reasons noted supra.

The 35 U.S.C.103 rejection

However, in the alternative that the amount of enzyme is not anticipated or inherent to the cited EP patent as discussed supra, then the amount or dosage would certainly have been within the purview of an ordinary artisan to determine since the EP patent clearly teaches at page 7, lines 8-9, the right dosage can easily be estimated by a person skilled in the art. Therefore, to select for optimum amounts is within the purview of the skilled artisan. Thus, alternatively the acid phosphatase containing enzyme preparation in an amount within a range of 0.1% to 10% is *prima facie* obvious over the cited EP patent.

With respect to the argument that the reference relied upon by Appellants and attached as Appendix C shows cleavage of RNA is affected by nucleases and not by acid phosphatases alone is acknowledged; however, the claimed subject matter does not necessarily omit the presence of nucleases. The Patent Office does not need to address features which are not claimed (i.e. presence of nucleases). Appellants do not require the presence of nucleases to degrade RNA in their claimed subject matter. Thus, the reference upon which Appellants rely is merely a standard for certain biotechnologies and not a requirement of the art nor of the instant claimed invention. Therefore, the presence of nucleases need not be a required teaching of the cited EP patent which has been cited against Appellant's claimed invention as prior art.

Furthermore, the argument that the cited disclosure against the instant claims, the EP patent, does not teach RNA at all is noted but the RNA is contained within the vegetable protein material as admitted by Appellants as noted above. The prima facie case of obviousness set forth against the Appellants' claimed invention does indeed establish degradation of phytates, and phytic acids. Appellants have admitted, as noted above, that it is well known that acid phosphatases degrade RNA. Note Appellants' Appeal Brief at page 8, second full paragraph, lines 3-5. In the presence of acid phosphatase a vegetable protein containing RNA would be expected to have its RNA degraded. Appellants have admitted, as noted above, that RNA would be degraded. Appellants admit at page 8 of their Appeal Brief, as noted above, that RNA would be degraded by using an enzyme preparation containing acid phosphatase in the method of the cited EP patent.

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Thus, the expected successful result is based on the cited prior art reference, the EP patent. Acid phosphatase is well known in the art to degrade RNA and vegetable protein is well known in the art to contain RNA. Therefore, a vegetable protein in the presence of an enzyme preparation containing acid phosphatase would have been expected to degrade RNA because of what the cited EP patent teaches and what is well known in the art by an ordinary artisan. For one of skill in the art to select for RNA to be degraded, which is a well known ingredient of the disclosed vegetable protein material of the EP patent, is well within the purview of the skilled artisan. For example, RNA is sequenced by adding a phosphatase to cleave inorganic phosphorous. This reduces the complexity of RNA by breaking it into fragments and successfully results in degrading the compound for purposes of studying its base sequences.

Also, Appellants' claimed invention does not specifically recite which phosphorus bonds are degraded, the claims are directed to degradation of RNA not specified bond linkages as set forth by Appellants' arguments and exhibit literature. All that is necessary is that phosphorus linkages are degraded in order for RNA to be degraded, the mere removal of a phosphorus group degrades the RNA. Enzyme classification of RNA cleaving enzymes is acknowledged. However, the cited reference remains viable for providing an alternative *prima facie* case of obviousness against Appellants' claimed invention.

Appellants' argument that it is an unsubstantiated leap of logic to assume that RNA reacts the same as phytates and phytic acids merely because each type of compound contains phosphorous groups is noted; however, acid phosphatase is well

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known by Appellants and those skilled in the art to be effective against RNA and the enzyme is clearly disclosed by the cited EP patent and is indeed contained by the disclosed enzyme preparation. One of skill in the art would have expected RNA to be degraded in its presence. RNA as admitted by Appellants is contained in vegetable protein material and thus, in the presence of acid phosphatase RNA would have been, at the very least, expected to be degraded.

Examiner concedes that RNA is not specifically recited in the cited EP patent, however, it is contained in vegetable protein material which is disclosed by the cited EP patent. While Leach et al. and Cech et al. teach RNA cleaving enzymes and the separate classification of nucleases from phosphatases, Appellants admit as noted above, and Leach et al. and Cech et al. teach that acid phosphatases degrade RNA by the removal of phosphorous. Furthermore, Appellants' claimed invention does not omit the presence of nucleases.

Thus, as admitted and noted above, Appellants agree that RNA would be degraded by use of an enzyme preparation containing an acid phosphatase enzyme in the method of the EP patent. Thus, essentially Appellants are admitting that in the presence of the acid phosphatase RNAs will be degraded (note the Appeal Brief, at page 8, second full paragraph, lines 3-5). Acid phosphatases are clearly disclosed by the cited EP patent and all of the examples, as discussed supra require the enzyme preparation containing acid phosphatase. RNA is contained in the disclosed vegetable protein material of the cited EP patent.

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Therefore, the degradation of the RNAs in the vegetable protein material in the presence of an acid phosphatase is an expected successful result. Alternatively, therefore, the expectation of successful degradation of RNA is evident in the teachings of the cited EP patent because it is well established that RNA is degraded by acid phosphatase. Webster's Dictionary defines "degrade" as to reduce the complexity of a chemical compound. Clearly the removal of phosphorous groups from RNA reduces it's complexity. Alternatively, Appellants' claimed invention is *prima facie* obvious over the cited EP patent.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Deborah K. Ware  
April 21, 2003

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